

WITK The Spark Gap

September 1980

Book VI Vol IX

Official Journal of the Wellesley Amateur Radio Society

The summer season is just about over by now and it's time once again to start another active year of the Wellesley Amateur Radio Society. The summer itself was rather eventful, too. Field Day back in June went off well at Wellesley College with a fairly large group of participants and a good number of contacts being made. The June VHF Contest at Mt. Wachusett was a great success with previous contact totals being improved by a large margin. The picnic with the Middlesex club in July featured very nice weather but a small turnout; those who came all had a good time anyway.

The club activities this year will be similar to previous years with the usual activities spread throughout the year. We are currently planning to continue having a fall flea market as we started last year, but have not yet acquired a site. Some new events this year will be the Boston 350 Parade on September 21 which will require a large number of Amateurs for parade communications. Also this year we are planning on having a club banquet as many of the other radio clubs do. It has been suggested that the banquet be held around Christmas time when we do not have any regular meetings, perhaps right after the message fair. If you have any input on this subject or any other planned or potential activities, contact one of the club officers. We will once again have a fall Nov-

ice class, so if you know of anyone who is interested in getting started in Amateur Radio, get them in touch with the club. Tentative starting date for the class is October 14.

Over the past few years there have been some complaints that our meetings get boring, that we spend too much time on business. A few years ago one meeting a month was devoted to business and the other was reserved for a speaker, a film, or some other such activity. We will once again try to hold to that policy this year, with business being taken care of during the first Thursday of the month, and a speaker, etc., on the third Thursday of the month. Hopefully this will make the club more interesting for those of you who do not take part in many of the activities we hold.

Once again, I would like to encourage all club members to contribute to the Spark Gap when they have anything of interest. We received quite a few items toward the end of last year, and it's hoped that as many members as possible will continue to contribute. The newsletter is for everyone, and so everyone's help is needed. Special thanks go to the following people who contributed to the Spark Gap during the 1979/80 club year: Jim Hatherley, WA1TBY; Mike Adlerstein, K1FB; Pete Bradley, N1ADX; Jim Idelson, K1IR; David Curry, K1TK; Eric Thoresen, K1OGF; George Young, WA1YAU; David Kirschen, WA1ZRH; Bill Downing, WA1PQY; Dick Paret, WA1ZLQ; Glenn Brodie, N1ACN; Joe McGrath, WA1JIR. □

Dues Dues Dues...

With the start of the new year it's also dues time. Dues for the 1980/81 club year will remain at \$8.00 per person, and \$2.00 for additional family members who do not receive their own Spark Gap. Please get your dues into Jim Hatherley, WA1TBY, 46 Hobson Street, Brighton, Mass. 02135, or bring them along to one of the September meetings. □

MEETINGS THIS MONTH:

September 4, 1980, at 7:30 pm

September 18, 1980, at 7:30 pm

Intermediate Bldg., Wellesley Hills, Mass.

FIELD DAY!

by Bill Hanlon, N1ADY

The 1980 version of the Wellesley Amateur Radio Society Field Day was held at Wellesley College near the Science Building. Wellesley College provided a beautiful campus setting for operating, although the location we were restricted to was in a slight hollow with somewhat curtailed VHF activity as a result.

During setup and early operation on Saturday the weather was hot and sunny but later it cooled down and by Sunday morning it had become overcast which turned into rain before the end of operations on Sunday afternoon. With an adequate supply of tents and such, operation was as comfortable as Field Day can be.

Equipment consisted of a Kenwood TS-820S, Ten-Tec Argonaut for QRP, Drake TR4CW, Yaesu FT-625RD for six meters, Kenwood TS-700S for 2 meter multi-mode operation, various two meter FM rigs, and a complete OSCAR satellite setup consisting of a KLM Multi 2700 for two meters, KLM 140 watt linear, Vanguard converter for 435 MHz receiving, and a Yaesu FT301 which the converter fed. With this rather complete setup, operation of five stations was possible at once, using all bands from 160 meters up through 2 meters, although all possible combinations of bands and modes were not used. Not to be forgotten in the station equipment is the antenna farm which was erected, consisting of 80 and 40 meter dipoles, a three element tribander, six meter yagi, and two meter yagi. For OSCAR work, separate two meter and 70 cm antennas were erected for circular polarization.

Although last year's total of over 1000 contacts was not achieved, this year's score was still quite good. All possible bonus points were claimed, for all emergency power, publicity, traffic handling, natural power, OSCAR operation, and copying the W1AW Field Day bulletin. The breakdown of QSO totals by band and mode is as follows:

<u>Band</u>	<u>CW</u>	<u>Phone</u>
80	27	---
40	89	258
20	129	39
15	---	62
10	---	21
6	---	23
2	---	19
OSCAR	---	1
TOTAL	245	423

A good sized group took part in the fun, including the following calls: K1FB, K9HI, K1OGF, KA1IK, KA1IU, W1FL, KA1DHM, KA1EAQ, N1ABS, N1ADY, WA1HRV, WA1HVS, WA1JIR, WA1PQY, WA1RSV, WA1TBY, WA1YAU, WA1YHV, WA1ZLQ, WB1BUM, WB1FCY, WD9ERI, and Diane McGrath. Special thanks goes to the Wellesley College Administration for the use of the site and to Leo Donahue, Wellesley CD director and Fire Chief for assistance with the generator. ☐

Minutes

Meeting of July 24, 1980:

The meeting was opened at 7:44 pm by incoming President David Curry, K1TK.

The minutes of the previous meeting were read.

It was announced that on September 21 a Boston 350 Parade will be held and the National Guard needs communications help from 20 to 25 hams. After discussion, it was decided that the club would organize the required help.

The 1980/81 calendar of events was discussed as was the 1980/81 budget.

Finally the treasurer's report was read and the meeting closed at 10:48. ☐

OFFICIAL BULLETIN

Nr 73, dated July 1, 1980:

Petitions to expand the 27 MHz CB band and to legalize the widespread unlicensed single sideband operations between the CB band and the Amateur 10 meter band were considered by the FCC today. The ARRL had filed comments opposing the petitions. Last December, as described in March 1980 QST, page 73, the FCC has instructed its Private Radio Bureau to prepare a draft Notice of Proposed Rulemaking on the subject.

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society



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THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, F.C.C. RULES & REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SENT THEIR ARTICLES (TYPEWRITTEN IF POSSIBLE) TO THE EDITOR-IN-CHIEF OR TO THE CLUB ADDRESS.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS \$8. THE CLUB YEAR RUNS SEPTEMBER 1 TO AUGUST 31. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
324 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181



At the FCC meeting today, the draft was vigorously opposed by the Field Operations Bureau because of enforcement and interference problems. After extended discussion the Commissioners voted to have prepared a Notice of Inquiry seeking answers to many troubling questions before proceeding further with this matter. ARRL will file appropriate comments when this Notice of Inquiry is released. In the meantime, the CB rules and the status of the illegal operators remain unchanged. Further developments will be reported in QST.

Nr 77, dated July 17, 1980:

The FCC has adopted formal rules for the Amateur Satellite Service. The new rules are primarily those which were proposed in Docket 19852 with minor modifications. See February 1980 QST, page 80. The new rules will be effective no sooner than 30 days from their publication in the Federal Register, a date not yet determined. Details will appear in September 1980 QST.

Nr 78, dated July 24, 1980:

The new edition of the ARRL Net Directory is now available. Listing nearly 800 public service nets by location and frequency, this newly revised booklet is also packed with information on all the basics of traffic handling and net operation. You may obtain a copy by sending a self-addressed nine by twelve inch envelope with forty-one cents U.S. postage to ARRL Net Directory, 225 Main Street, Newington, Conn. 06111. □

hr REPORT

A new 10 GHz DX record, 757 km, was set July 12 when IØSNY/7 worked both IW3EHQ/3 and I3SOY/3. Ten milliwatt Gunnplexers and one-meter dishes were used at both ends, from Brindisi on the south end to Col Visentin in the Italian Alps on the north. The former 10 GHz record, 633 km, was also held by Italians. Thanks W1CF.

hr Report, August 15, 1980

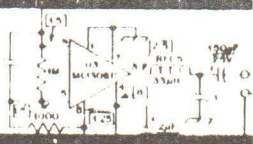
Extending ID time periods from the present 10 minutes to 15 minutes has been proposed in a Petition for Rule Making filed last month with the FCC. Comments on the proposal, designated RM-3714, must reach the Commission by September 6. The required copy may be sent to petitioner John Gebuhr c/o his attorney, Brian Zdan, 4817 Douglas Street, Omaha, Nebraska 68132.

hr Report, August 15, 1980

Plain English Amateur rules continue to move along at the FCC, with a draft covering the Amateur Satellite Service and RACES as well, now circulating within the Commission. If this draft doesn't run into too much trouble, it's possible it could be out for public comment as soon as late fall. Plain English rules for both the CB and VHF Marine Services are already in effect, and the final version of the Radio Control rules should be out soon.

hr Report, August 15, 1980 □

Tek Tok



by Walter E. Lenk, K1YTY

In this day of "mini systems" it is becoming more difficult to identify color codes of resistors, or values of capacitors, diodes, IC's, or transistors when building Heathkits or your own "scratch-built" ham gear. A magnifying glass is a must.

One way to solve this problem is to buy a supply of $4\frac{1}{2}$ x 3 envelopes. On each envelope write the color code of the resistor or the value of the capacitor etc., and the number required to complete the project. Place each part in its respective envelope, and take each part one by one from the envelope as it is being used.

I have found this method foolproof in preventing errors and is an excellent method to make sure Heathkit has supplied all the necessary parts. You should check your envelopes against the parts listed in the Heathkit manual before starting the operation.

Last but not least, always use your magnifying glass to check each soldered joint immediately after soldering. Always check at least twice each step before starting the next operation. □

Wonder Abouts...

Back in the 1940's, QST ran a column called "The Crystal Ball" in which hams were given the opportunity to fantasize about the future of Amateur Radio. Keeping in mind some of the currently available equipment, the following item titled "Push-Button Communications Receivers" makes very interesting reading:

"This rag-chewer will wait just about so long for the manufacturers to dream up a push-botton communications receiver; then he is going to invent one himself and collect the royalties.

"Here's how it should work: the op holds down a button while tuning in a station; thereafter, pushing the same button will instantly swing the band-spread back to the selected spot. I'd want to be able to change that setting

instantly. No soldering irons, pliers or screwdrivers, please. I'd like three or four push buttons for those three-way rag-chews, with an extra one for our own frequency for monitoring purposes.

"--Elliot R. Weyer, W2LLZ"

I wonder if W2LLZ ever got to collect the royalties on his idea, which seems to be part of all the new transceivers now? □

CHUCKLE KORN-LR

"QRX"

by Pete Bradley, N1ADX

Dear Sir,

I am writing in response to your request for additional information. On my accident report form I put "poor planning" as the cause of my accident. I am now sending you a detailed explanation.

I am an Amateur Radio operator, and this summer I climbed my 120 foot tower to lower the antennas to the ground for checking. When I climbed to the top of the tower I first removed the stacked 20 meter beams from the rotatable mount. I tied these to a rope. I then tied the 10 meter, 15 meter and 40 meter beams to the same rope and climbed down.

On the ground I untied the rope to gently lower the 310 pounds of antennas to the ground. As I only weigh 160 pounds and I kept a tight hold on the rope, I slowly started to rise into the air. Half way up the tower I met the 40 meter driven element and this explains the fractured skull. As the array hit the ground, the 40 meter and 15 meter beams, and one 20 meter beam broke loose. A remaining 20 meter beam only weighed 40 pounds so I found myself rapidly descending downwards. About 60 feet down, the remaining beam broke both my legs, and I landed in a heap on the ground with several cracked ribs.

As I lay there thinking about my fate, with the remaining beam high above my head, I am sorry to say that I lost my presence of mind...I LET GO OF THE ROPE....

(Only in fun and based on a similar story by Carolyn Mellor which had the same moral). □

OLDE TIME RADIO

by Jim Idelson, K1IR

Part Four

By the early 1920's pioneer broadcast stations had proved the potential popularity of radio. This early success lead to a desire to expand radio broadcasting to a larger market. Westinghouse, ahead in the race with KDKA, soon opened stations WJZ, Newark, New Jersey and WBZ, Springfield, Massachusetts. They were located atop Westinghouse factories and equipped with duplicate transmitters.

WJZ went on the air on October 1, 1921. This station, Westinghouse's third to be activated, was to become the most important of all their broadcast facilities. Although WJZ was not located in a metropolitan area, it was the closest of all stations to the New York City theatre district. It was this advantage which afforded the station with its success.

A slew of famous actors and acts came to WJZ to provide program material--Eddie Janis, vaudeville actor, Vaughn deLeath, singer, Percy Grainger, Olga Petrova...the list goes on. It could not last forever, though. Each act was done with nothing in return. The trip to Newark was getting to be a chore, rather than the exciting journey it used to be.

A new studio was built at the Waldorf-Astoria Hotel at 34th Street and Fifth Avenue. Still, it became increasingly difficult to get talent into the studio. Elaborate lobbies were built; flowers were given, and limosines transported the guests. Money was poured into the operation taking the innocence out of it and making it an aggressive business enterprise.

In Chicago, KYW, another Westinghouse station opened, this time in the Chicago Civic Opera. The idea was to broadcast opera and only opera. Each and every performance of the season was aired by KYW. Ten microphones on stage were switched in and out by the main operator, a commendable technical achievement and the most complex sys-

tem yet used.

When the opera season closed, the station moved to the Commonwealth Edison building. The list of personalities who offered their talents in Chicago include Rudolph Valentino and Al Jolson as well as many others.

Nineteen twenty-one was a time for radio broadcasters to learn a few things which would become essential to their trade.

Operators at KDKA came up to the roof one night in the fall of 1921 to find that their tent studio had blown down during a heavy gale. Winds were still blowing hard making it impossible to erect the tent again before program time. In a last ditch attempt to get on the air they dragged the sopping wet canvas indoors and crudely assembled the tent there. It worked as well as it had outside, and caused the Westinghouse engineers to solve the problem of echos and resonance. They later found that draped walls would work just as well. So ended radio broadcasting's days of pioneering in the great outdoors.

(In spite of all efforts to become professional, early broadcasters had some problems getting used to the medium. Some of these stories of the early days next month.) □



"I CAN COPY THIRTEEN ITTY-BITTY WORDS A MINUTE."

VHF/UHF Contest

by Nels Anderson, K1UR

Way back in June, even before Field Day came the 1980 version of the ARRL June VHF Contest. This year due to a conflict over the site we went to Mt. Wachusett in Princeton, Massachusetts instead of Mt. Equinox in Vermont. Although this site is considerably lower than Mt. Equinox, it does have the advantage of being much closer to the Boston area where there are a great number of people to work. And of course this also makes is a much easier trip getting there!

Again, our equipment improved over each earlier contest and as a result our score went up, in fact it went up considerably. Since most of our VHF contest participants are not experienced VHFers, each contest is more of a learning experience than an all out effort to win something. In this respect, we have been very successful.



K10GF, K1TK and WA1PQY operating 432 MHz in the UHF contest.

In 1978 when the first serious effort at the June contest was made from Mt. Equinox, equipment consisted of one multi-mode two meter rig, an FM six meter rig and an FM 450 rig, and a minimum of antennas. Consequently, our score was rather low. This year we came very well prepared with several two meter multi-mode rigs and amplifiers and one good station for each band from 50 MHz to 2304 MHz.

With this improvement in equipment the participants have acquired plus the experience in operating in several contests these expeditions have become very worthwhile events.

Anyway, in detail this year's primary stations were as follows: for 50 MHz a Yaesu FT-625RD, Heath SB-220 and six element yagi; for 144 MHz a Kenwood TS-700s, homebrew 500 watt amp and eight element quagi; for 220 MHz a Midland 13-513 25 watt FM only rig and an eight element yagi; for 432 MHz a modified Motorola T-44 FM transmitter with VXO control (modified to operate CW), a Parks receive converter and preamp, and a Cushcraft collinear array; for 1296 and 2304 MHz all equipment was provided and operated by W100P and was homebrewed by him.

This impressive array of gear resulted in 549 QSOs over the weekend, a large improvement over the 351 QSO total achieved from W1YK in Worcester last January and the same total from Mt. Equinox last June. Most notable in this score is the great improvement in the 144 and 432 MHz totals, due to the new high power two meter amp and improved receiver on 432. In fact, two meters improved so much that this band alone almost equalled our entire QSO total of the previous two contests. The entire rundown went as follows:

Band	QSOs	Pts each	Pts.	Mult.
50	174	1	174	33
144	322	1	322	17
220	23	2	46	7
432	22	2	44	9
1296	6	3	18	5
2304	2	3	6	2
TOTAL	549		610	73

Some of the highlights of these QSOs were 1296 contact with Pennsylvania and six meter contact with the Bahamas (in fact, this same station got worked three different times as each new operator in his excitement forgot to check the dupe sheet before making the contact).

Participants from Mt. Wachusett included the following calls: K10GF, K1TK, K1UR, KA1IU, N1ATA, N2AWG, W100P, WA1PQY, WA1WJK, WA1YOJ, WA1ZLQ, WB1BU. If you are interested in joining this group on the next contest, which will be in mid-September, please feel free

to do so; it's a great learning experience if your operating has been only in the "DC bands" below 50 MHz.

The August UHF Contest, a much less serious effort than the June contest, was also less successful. Operation again took place from Mt. Wachusett, but operation was limited to 432 MHz; there was obviously less opportunity to make contacts (actually, contest rules allowed operation on all bands from 220 MHz on up, but equipment was only available for the one band. Only four contacts were made during an afternoon of operation. Some new equipment was given a shakedown in preparation for the bigger contest in September so even though the contact total was low this chance to go on the air with new equipment was worthwhile.

Operators for this event were K1TK, K1UR, K1OGF, and WA1PQY. Our thanks go to the Wellesley Fire Department for the loan of a generator somewhat smaller than the club owned one. □

hr REPORT

Recreation areas may ban 2-way radios, two Ohio Amateurs learned recently. Visiting "Valley Fair" in Shakopee, Minnesota (owned by Cedar Point in Ohio), with their families, the two were informed that they had to surrender their handhelds to park personnel or leave the park. Rationale for the demand was that the radios could be used to "set off a bomb". The park manager also told the two that 2-way radios were barred from all park property, including the parking lots--surely news to the millions of CB-equipped motorists who visit such facilities!

hr Report, August 15, 1980

Now there's another OSCAR! But it's not an Amateur project and it doesn't carry Amateur Radio. Aviation Week (July 28 issue) reports that GT&E is using the name OSCAR to describe a new military satellite program--Optical Submarine Communications by Aerospace Relay--designed to communicate with submerged submarines from outer space. AMSAT's legal counsel is investigating

the issue, but it appears that the name OSCAR is not protected by copyright.

"OSCAR" will likely remain an Amateur satellite identification despite GT&E's use. Although AMSAT's use of "OSCAR" is not protected as a registered trademark, the law does provide protection for such a name that has been in use for five years or more--and we've been using "OSCAR" since the very early '60s!. Thanks K6PGX.

hr Report, August 1 & 8, 1980□

"New Tickets"



Congratulations to Thomas Burton on passing his General class exam and on receiving the new callsign N1BCQ. □

OFFICERS

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David Curry, K1TK, 237-2450

VICE PRESIDENT:

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Scott Nacey, WA1YOJ, 235-1599

Dick Paret, WA1ZLQ, 762-5074

Deadline for next issue: 9/15/80.

BIGGER and
BETTER THAN EVER!

HAM RADIO FLEA MARKET

SATURDAY
SEPT. 6

Starts at 9am

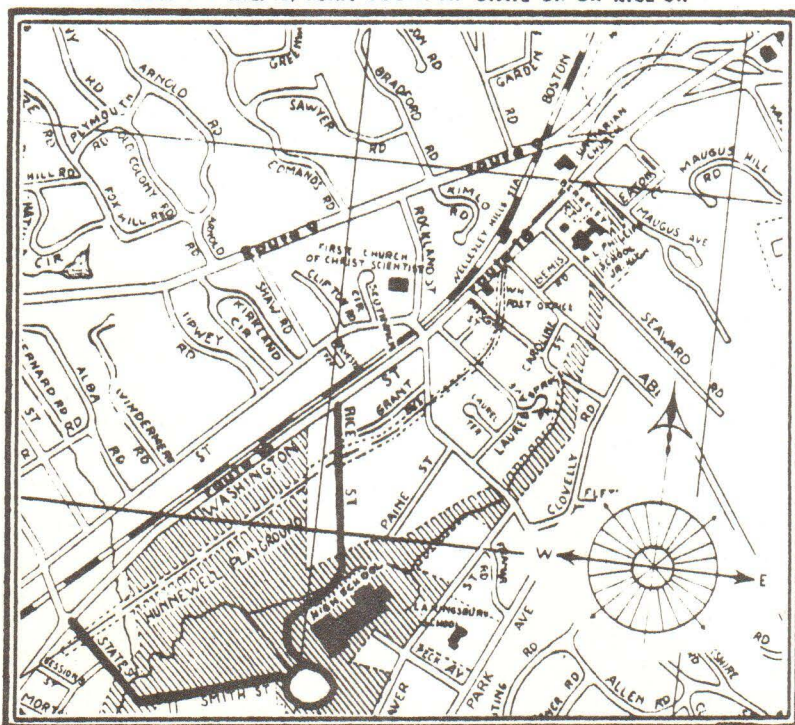
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WITKZ



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